REMARKS

This Amendment is filed in response to the Office action dated August 10, 2007. All objections and rejections are respectfully traversed.

Claims 23-46 are pending.

Claims 23, 31, 39, and 40 have been amended.

Request for Interview

The Applicant respectfully requests a telephonic interview with the Examiner after the Examiner has had an opportunity to consider this Amendment, but before the issuance of the next Office Action. The Applicant may be reached at 617-951-2500.

Claim Rejection – 35 USC §103

At paragraphs 9 of the Office Action, claims 23, 25, 26, 28, 29, 31, 33, 34, 36, 37, 39-41, and 45 are rejected under 35 U.S.C. §103 as being unpatentable over Meyer, US Patent No. 5,867,733, hereinafter Meyer, in view of Ohran et al., US Patent No. 5,649,152, hereinafter Ohran.

The present invention, as set forth in representative claim 23, comprises in part:

23. A storage controller, comprising:
a destination to store a snapshot from a source;
a first write request to write to first data blocks, the first data blocks already copied in the snapshot;
the first write request to be written to the source;
a second write request to write to second data blocks, the second data blocks not already copied in the snapshot
the second write request being placed into a first in first out queue; and

in response to completing the snapshot, the second write request being written from the first in first out queue to the source.

Meyer discloses a system for direct transfer from one mass storage device to a second storage device using an enhanced integrated drive and electronics (EIDE) controller. A processor in a PC computer (host) initializes the transfer of data from one disk to a second disk. The transfer of data from one disk to the second disk is controlled by the data storage device controller, and is accomplished without employing the memory array and the computer bus. Moreover, Meyer ***does not*** disclose a system that utilizes a snapshot.

Ohran discloses a system and method for providing a static snapshot, or image, of data stored on a mass storage system at a particular point in time. (See Ohran Column 2, Lines 49-51).

> "This is accomplished by creating a virtual device that will appear as a mass storage device containing the static image. ***Write operations to the mass storage system are also intercepted by the method. Copies of blocks on the mass storage system are placed in a preservation memory whenever they are going to be changed by a write operation***, unless an entry for that block is already in the preservation memory. During a read of the virtual device, the preservation memory is first checked, either directly or using a table of contents of the preservation memory, to see if it contains a copy of the block from the specified location. If the preservation memory has such a copy, that copy is returned as the result of the read. Otherwise, the block is read from the mass storage system." (See Ohran, Column 2, Lines 52-62).

Applicant respectfully urges that that Meyer and Ohran, taken alone or in combination do not teach nor suggest Applicant's claimed novel

a destination to store a snapshot from a source;

a first write request to write to first data blocks, the first data blocks already copied in the snapshot;

the first write request to be written to the source;

a second write request to write to second data blocks, the second data blocks not already copied in the snapshot

the second write request being placed into a first in first out queue; and

in response to completing the snapshot, the second write request being written from the first in first out queue to the source.

More particularly, Applicant respectfully urges that Meyer and Ohran, taken alone or in combination do not teach or suggest Applicant's claimed novel

a first write request to write to first data blocks, the first data blocks already copied in the snapshot;

the first write request to be written to the source;

a second write request to write to second data blocks, the second data blocks not already copied in the snapshot

the second write request being placed into a first in first out queue

Specifically, Ohran discloses a system where "[c]opies of blocks on the mass storage system are placed in a preservation **memory whenever they are going to be changed by a write operation**..." (See Ohran, Column 2, Lines 55-57). Differently, Applicant discloses a system where a first write request to write to first data blocks, the first data blocks already copied in the snapshot***; the first write request to be written to the source.*** Moreover, Applicant discloses a system that places ***the second write request being placed into a first in first out queue***, if a second write request to write to second data blocks, the second data blocks ***not already copied in the snapshot.*** Thus, Applicant's system only queues those requests that are not already copied in the snapshot and writes those requests already copied in the snapshot to the sources. Quite differently, Ohran queues, in a preservation memory, all the data blocks that are going to be changed by a write operation.

As such, Applicant respectfully submits that that Meyer and Ohran, taken alone or in combination do not teach nor suggest Applicant's claimed novel ***a first write request to write to first data blocks, the first data blocks already copied in the snapshot; the first write request to be written to the source; a second write request to write to second data blocks, the second data blocks not already copied in the snapshot the second write request being placed into a first in first out queue.***

At paragraph 21 of the Office Action, claims 24, 27, 32, and 35 were rejected under 35 U.S.C. §103 as being unpatentable over Meyer, in view of Ohran and in further view of Tawil, US Patent No. 6,421,723

At paragraph 24 of the Office Action, claims 30 and 38 were rejected under 35 U.S.C. §103 as being unpatentable over Meyer, in view of Ohran and in further view of Dulai et al., US Patent No. 6,205,479.

At paragraph 26 of the Office Action, claims 42-44 were rejected under 35 U.S.C. §103 as being unpatentable over Meyer, in view of Ohran and in further view of Simpson et al., US Patent No. 6,128,306.

Applicant respectfully notes that claims 24, 27, 30, 32, 35, 38, and 42-44 are dependent claims that depend from independent claims believed to be in condition for allowance. Accordingly, claims 24, 27, 30, 32, 35, 38, and 42-44 are believed to be in condition for allowance.

All independent claims are believed to be in condition for allowance.

All dependent claims are believed to be dependent from allowable independent claims.

Applicant respectfully solicits favorable action.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,

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